

BORISOV, A.A.

"Gravity Anomalies in the Uplands"

Prikladnaya geofizika; sobornik statey, vyp. 21 (Applied Geophysics; Collection of Articles, Nr 21) Moscow, Gostoptekhnizdat, 1958. 221 p.

FOTIADI, Eppominond Eppominondovich; BORISOV, A.A., red.; KUZ'MINA, N.N., vedushchiy red.; FEDOTOVA, I.G., tekhn. red.

[Geological structure of the Russian Platform, based on regional geophysical prospecting and key well drilling data] Geologicheskoe stroenie Russkoi platformy po dannym regional'nykh geofizicheskikh issledovaniy i opornogo bureniya. Moskva, Gos.nauchn.-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 243 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut geofizicheskikh metodov razvedki. Trudy, no.4) (MIRA 12:1)
(Russian Platform--Geology) (Prospecting--Geophysical methods)

BORISOV, A.A.

Gravity anomalies in mountain regions. Prikl.geofiz. no,21;
84-103 '58. (MIRA 12:1)

(Gravity)

BOKSERMAN, Yu.I.; BORISOV, A.A.; BROD, I.O.; VASIL'YEV, V.G.; YELIN, N.D.;
YEROFEYEV, N.S.; KUDRYASHOVA, N.M.; L'VOV, M.S.; MIRCHINK, M.F.;
MURATOVA, A.T.; NEVOLIN, N.V.; SOKOLOV, V.L.; TROFIMUK, A.A.;
YERSHOV, P.R., vedushchiy red.; TROFIMOV, A.V., tekhn.red.

[Gas resources of the U.S.S.R.] Gazovye resursy SSSR. Moskva,
Gos.nauchno-tekhn.isd-vo nef. i gorno-toplivnoi lit-ry, 1959.
350 p. (MIRA 12:8)

(Gas, Natural)

BORISOV, A.A.

~~Subsurface structural pattern of the Murgab buried salient.~~
Geol.nefti i gaza 3 no.10:29-34 0 '59. (MIRA 12:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut Geofizika.
(Murgab region--Geology, Structural)

BORISOV, Aleksandr Aleksandrovich; VASIL'YEV, Viktor Grigor'yevich;
GRISHIN, Grigoriy Leont'yevich; IVANOVA, Marta Nikolayevna;
L'VOV, Mikhail Sergeyevich; SHIRYAYEV, I.Ye., red.; PERSHINA,
Ye.G., vedushchiy red.; FEDOTOVA, I.G., tekhn.red.

[Oil and gas prospecting in Siberia, Kamchatka, and the north-
eastern U.S.S.R.] Sostoianie i osnovnye napravleniia poiskovo-
razvedochnykh rabot na نفت' i gaz v Sibiri, na Kamchatke i
severo-vostoke SSSR. Pod red. I.E.Shiryaeva. Moskva, Gos.
nauchno-tekhn.izd-vo نفت. i gorno-toplivnoi lit-ry, 1960.
105 p. (MIRA 13:9)

(Siberia--Petroleum geology)
(Siberia--Gas, Natural--Geology)

BORISOV, Aleksandr Aleksandrovich; VASIL'YEV, Viktor Grigor'yevich;
ZHUKOVSKIY, Leonid Grigor'yevich; KAYESH, Yuriy Vladimirovich;
SEME NOVICH, Vladimir Vladimirovich; GRATSIA NOVA, O.P., red.;
DEMENT'YEVA, G.A., vedushchiy red.; GANINA, L.V., tekhn.red.

[Studies of the geology, and oil and gas potentials of Central
Asia] Ocherki geologicheskogo stroeniia i neftegazonosnost'
Srednei Azii. Moskva, Gos.nauchno-tekhn.izd-vo نفت. i gorno-
toplivnoi lit-ry, 1960. 174 p. (MIRA 13:11)

(Soviet Central Asia--Petroleum geology)
(Soviet Central Asia--Gas, Natural--Geology)

PHASE I BOOK REFORMATION

507/5914
507/53-24

Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki

Prilozheniya geofiziki; sbornik stat'ey, vyp. 24. (Applied Geophysics; Collection of Articles, No. 24) Leningrad, Gosizdatizdat, 1969. 260 p. 5,500 copies printed.

Sponsoring Agency: USSR. Ministerstvo geologii i otkrytykh rud.

Scientific Ed.: M.K. Polubny; Executive Ed.: A.A. Chibrikov; Tech. Ed.: I.M. Gerasimov

FOREWORD: This book is intended for members of scientific research organizations, engineers and technical personnel engaged in geophysical surveying and research in industrial organizations.

CONTENTS: This is a collection of 11 articles by different authors on new methods of interpreting data and evaluating techniques in seismic, electrical, and geomagnetic methods of surveying wells. The theory of seismic investigation and methods of outlining flat platform structures through seismic surveys are discussed, and theoretical problems of a new electrical survey method developed by the VNIIGeoelitsa (All-Union Scientific Research Institute of Geophysical Methods of Surveying) are analyzed. Recent developments in the interpretation of geoelectric and gravimetric methods and a new method for determining coal beds by gamma logging are also described. 24 periodicals are recommended. Most of the articles are accompanied by references, a majority of which are Soviet.

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Card 5/6

BORISOV, A.A.; RYMANOV, V.M.

Geological interpretation of magnetic anomalies in the southern part of Central Asia. Dokl.AN SSSR 133 no.6: 1395-1397 Ag '60. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki. Predstavleno akad. A.L.Yanshinym.
(Soviet Central Asia--Magnetic anomalies)
(Geology, Structural)

NEVOLIN, Nikolay Vasil'yevich; BORISOV, A.A., red.; DEMENT'YEVA, T.A., vedushchiy red.; KUZ'MINA, N.N., ved.; POLOSINA, A.S., tekhn. red.

[Tectonics of western Kazakhstan and prospects for finding gas and oil]
Tektonika Zapadnogo Kazakhstana i perspektivy ego neftegazonosnosti.
Pod red. A.A.Borisova. Moskva, Gos. nauchno-tekhn. izd-vo nef. i gornotoplivnoi lit-ry, 1961. 315 p. (MIRA 14:7)
(Kazakhstan—Petroleum geology)
(Kazakhstan—Gas, Natural—Geology)

S/169/62/000/006/014/093
D228/D304

AUTHOR: Borisov, A. A.

TITLE: Basic problems in the sphere of increasing the effectiveness of geophysical investigations

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 6, 1962, 19-20, abstract 6A140 (Novosti nef. i gaz. tekhn. Geologiya, no. 10, 1961, 41-43)

TEXT: The leading methods in prospecting and surveying operations for oil and gas are seismic surveying and economic geophysics. The wide application of other geophysical methods ensures the complexity and the high effectiveness of the investigations. To lower the cost of regional operations, it is recommended that the methods of magnetotelluric currents and field formation should be introduced, and that point seismic soundings etc. should be perfected. To raise the effectiveness of seismic surveys during deep structure detailing in perspective zones, controllable set reception and improved apparatus for intermediate magnetic recording should be introduced, ✓

Card 1/3

Basic problems in ...

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D228/D304

grouping should be applied, and the material's quality should be increased. The increase in the survey depth potential should be achieved by developing new techniques, perfecting existing methods, selecting their complex, and applying the procedures of mathematical analysis in the interpretation. It is expedient to accomplish regional investigations and especially searches and structure preparation in several stages. A deep structure's main features are determined, and the most perspective zones and largest local structures are distinguished in a new area by reconnaissance surveys. In many cases additional more detailed or deeper regional operations, covering the previously studied areas, have to be carried out after the preparation of separate structures for drilling and the commencement of their commercial exploration for the purpose of the survey's further substantiation and direction. The vital task is to boost work on the study of sea areas by geophysical methods. Certain procedures for investigating sea basins should be introduced during river surveys in difficultly-accessible regions. One of the most important problems is the elaboration and the development of direct geophysical methods for seeking oil and gas

Card 2/3

Basic problems in ...

S/169/62/000/006/014/093
D228/D304

pools. In the field of economic geophysics urgent problems include:
The development and the introduction of acoustic logging for in-
vestigating carbonate rocks; the development of induction and di-
electric logging -- for directly determining the degree of oil and
gas saturation; and the development of heatproof well apparatus
and equipment for investigating wells of small diameter. [Abstrac-
ter's note: Complete translation.]

✓

Card 3/3

BORISOV, A.A.

Special regularities in the distribution of oil and gas pools.
Geol. nefti i gaza 5 no.7:12-17 J1 '61. (MIRA 14:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki.
(Petroleum geology) (Gas, Natural—Geology)

BORISOV, A.A.

Some characteristics of the subsurface geology of the platform
type territories in the Soviet Union. Sov.geol. 5 no.1:35-53
Ja '62. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki.
(Geology, Structural)

BORISOV, A.A.; BLOKHIN, P.A.; SHIROKOV, A.S.; SHNEYERSON, M.B.

Methods for the combined geophysical study of oil- and gas-bearing structures in ~~plateau~~ provinces. Sov.geol. 5 no.11:15-35
N '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut
geofizicheskikh metodov razvedki.
(Prospecting—Geophysical methods)

BORISOV, A.A.; DIKENSHTeyN, G.Kh.; KRAVCHENKO, N.Ye.; LOPATINA, N.P.;
MALOVITSKIY, Ya.P.; KORNEV, V.A.

Basic features of the tectonics of the Caspian Sea and adjacent
land areas. Geol. nefti i gaza 6 no.12:18-23 D '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut
geofizicheskikh metodov razvedki i Vsesoyuznyy nauchno-
issledovatel'skiy geologorazvedochnyy neftyanoy institut,
Moskva.

(Caspian Sea region--Geology, Structural)

BORISOV, A.A.; MALOVITSKIY, Ya.P.

Interpretation of geophysical data as revealed by the studies
of the Caspian Sea region. Biul. MOIP. Otd.geol. 37 no.4:
132-133 Jl-Ag '62. (MIRA 16:5)

(Caspian Sea region--Geology)

BORISOV, A. A.

Hundredth anniversary of Anton Antonovich Kaminski's birth.
Izv. Vses. geog. ob-va 94 no.6:527-529 N.D '62.
(MIRA 16:1)

(Kaminski, Anton Antonovich, 1862-1936)

ALIYEV, I.M.; ARZHEVSKIY, G.A.; BORISOV, A.A.; GABRIELYANTS, G.A.;
DENISEVICH, V.V.; DIKENSHTeyN, G.Kh., doktor geol.-miner. nauk;
ZHUKOVSKIY, L.G.; IL'IN, V.D.; KAYESH, Yu.V.; KRAVCHENKO,
N.Ye.; REZVOY, D.P.; SEMENOVICH, V.V.; TAL'-VIRSKIY, B.B.;
SHEBUYEVA, I.N.; IONEL', A.G., ved.red.; VORONOVA, V.V., tekhn.
red.

[Tectonics, and oil and gas potentials of the western regions
of Central Asia] Tektonika i neftegazonost' zapadnykh raionov
Srednei Azii. Pod red. G.Kh.Dikenshteina. Moskva, Gostop-
tekhizdat, 1963. 309 p. (MIRA 16:7)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy geologoraz-
vedochnyy neftyanoy institut.

(Soviet Central Asia--Petroleum geology)

(Soviet Central Asia--Gas, Natural--Geology)

BORISOV, A.A.

Crustal development in the tectogenetic process. Izv.AN SSSR.
Ser.geol. 28 no.2:3-8 F '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh
metodov razvedki, Moskva.
(Earth—Surface)

BORISOV, A.A.; KRYLOV, N.A.; LETAVIN, A.I.; MALOVITSKIY, Ya.P.

Boundary of platforms of different age in the northern Caspian Sea region. Dokl.AN SSSR 148 no.4:896-899 F '63.

(MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki i Institut geologii i razrabotki goryuchikh. iskopayemykh. Predstavleno akademikom D.I.Shcherbakovym.
(Caspian Sea region—Geology, Structural)

BORISOV, A.A.; STEPANOV, A.Ya.

Aleksandr Mikhailovich Arkhangel'skii; on his 60th birthday.
Izv. Vses. geog. ob-va 96 no.3:255-256 '64 (MIRA 17:8)

BORISOV, A.A.

Morphology of Mohorovicic surface and its structural
significance. *Sov. geol.* 7 no.4:3-23 Ap'64.

(MIRA 17:5)

KROPOTKIN, P.N., otv. red.; BORISOV, A.A., red.; LYUSTIKH, Ye.N.,
red.; MAGNITSKIY, V.A., red.

[Isostasy] Izostaziia. Moskva, Izd-vo "Nauka," 1964. 70 p.
(Its: Doklady sovetskikh geologov, problema 12)

(MIRA 17:7)

1. International Geological Congress, 22d, 1964.

BELIAYEVSKIY, N.A., red.; ALI-ZADE, A.A., red.; ALIYEV, M.M., red.;
BAKIROV, A.A., red.; BELOUSOV, V.V., red.; BEUS, A.A., red.;
BOGDANOV, A.A., red.; ~~BORISOV, A.A., red.~~; BRENNER, M.M.,
red.; DYUKOV, A.I., red.; YERSHOV, A.D., red.; ZARIDZE, G.M.,
red.; KALUGIN, A.S., red.; KOSOV, B.M., red.; KOPIEV-
DVORNIKOV, V.S., red.; KOTLYAR, V.N., red.; LUGOV, S.F., red.;
MAGAK'YAN, I.G., red.; MARINOV, N.A., red.; MARKOVSKIY, A.P.,
red.; MALINOVSKIY, F.M., red.; PUSTOVALOV, L.V., red.; SATPAYEV,
K.I., red.; SEMENENKO, N.P., red.; TYZHNOV, A.V., red.;
KHRUSHCHOV, N.A., red.; SHCHEGOLEV, D.I., red.; YARMOIYUK, V.A.,
red.

[Materials on regional tectonics of the U.S.S.R.] Materialy po
regional'noi tektonike SSSR. Moskva, Izd-vo "Nedra," 1964. 193 p.
(MIRA 17:4)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy geologicheskii ko-
mitet.

BELYAYEVSKIY, N.A.; BONISOV, A.A.

Subsurface structure of the northwestern part of the Pacific mobile belt. Sov. geol. 7 no.9:29-46 S '64. (MIRA 17:10)

1. Gosudarstvennyy geologicheskii komitet SSSR i Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki.

FEDYNSKIY, V.V., otv. red.; POLSHKOV, M.K., zom. otv. red.;
BORISOV, A.A., red.; NEVOLIN, N.V., red.; KROLECHKO,
I.I., red.; FEDORENKO, A.N., red.

[Geological results of applied geophysics] Geologicheskie rezul'taty prikladnoi geofiziki. Moskva, Nedra, 1965. 292 p. (Mezhdunarodnyi geologicheskii kongress. Doklady sovetskikh geologov. Problema 2)
(MIRA 18:5)

1. Natsional'nyy komitet geologov Sovetskogo Soyuza.

ACC NR: AT7004465

SOURCE CODE: UR/2834/66/051/001/0078/0084

AUTHORS: Borisov, A. A.; Nifontov, B. I.; Romadin, N. M.

ORG: none

TITLE: Computing the stresses in pillars between rooms in mines

SOURCE: Leningrad. Gornyy institut. Zapiski, v. 51, no. 1, 1966, 78-84

TOPIC TAGS: mining engineering, stress distribution, underground facility

ABSTRACT: Present methods of computing characteristics and requirements of pillars between rooms in mines and other underground workings involve two-dimensional solutions, not three-dimensional, as the latter introduce distortions and can be used only in restricted circumstances. None of the two-dimensional solutions can determine either the value or the nature of stress distribution in pillars. Actual solutions of the three-dimensional problem have been approached only in recent years. The authors review the basic contributions of A. S. Kalmanok, Ye. S. Kononenko, and M. M. Filonenko-Borodich, and, starting from these, they assign first-approximation values to the stress tensors along the three principal coordinate axes. These expressions involve normal and tangential stresses, relations of height, width, and breadth (of the pillar), modulus of elasticity, Poisson's ratio, and compression of the pillar. From these expressions equations are derived, the solutions of which provide a general solution

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UDC: 622.838.53

ACC NR: AT7004465

to the problem, permitting examination of the stress state in pillars having any relations of height, width, and breadth. The results are very satisfactory, comparing well with experimental data and actually observed conditions. Three-dimensional models of optically active material are not adequate to show distribution of stresses along the pillar. Orig. art. has: 5 figures, 1 table, and 6 formulas.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 004

Card 2/2

BORISOV, A.A., inzh.

Nitriding pinions without after-grinding. Mashinostroenie no.1:
41-42 Ja-F '64. (MIRA 17:7)

BORISOV, A.A.

Nitriding gears without subsequent grinding. Metalloved. i term.
obr. met. no.3:63-64 Mr '64. (MIRA 17:4)

1. Kolomenskiy teplovozostroitel'nyy zavod.

RYBKIN, N.; BORISOV, A.A., redaktor; DZHATIYEV, S.G., tekhnicheskii redaktor

[Collection of problems in trigonometry, with a supplement of problems in geometry involving the use of trigonometry; for classes 8, 9, and 10 of the secondary school] Sbornik zadach po trigonometrii, s prilozheniem zadach po geometrii, trebuiushchikh primeneniia trigonometrii; dlia 8, 9, i 10 klassov srednei shkoly. Izd. 20. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 99 p. (MLRA 8:7)

(Trigonometry--Problems, exercises, etc.)

chem. sh.
BORISOV, A.A. (Moskva); KOGARKO, S.M. (Moskva); LYUBIMOV, A.V. (Moskva)

Application of shock tubes for the study of chemical reactions. PMTF no. 3:173-183 S-O '60. (MIRA 14:7)

(Shock waves)

(Gases at high temperatures)

(Chemical reaction, Rate of)

chemistry

82690

S/062/60/000/008/003/012

B004/B054

11.1000

AUTHORS: Kogarko, S. M. and Borisov, A. A.TITLE: Measurement of Retardations of Inflammation at High TemperaturesPERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 8, pp. 1348-1353

TEXT: The authors wanted to measure and compare the retardation τ of the inflammation of various hydrocarbon - air mixtures. They describe their method of measuring the temperature dependence of τ , and indicate some preliminary test results. The gas mixture was ignited by a reflected shock wave. Fig. 1 shows a diagram of the experimental apparatus. It consists of a tube 6 m long and 50 mm in diameter, in which sections 1 and 2 are separated by a membrane, sections 2 and 3 by a cock the opening of which is equal to the tube diameter. Section 1 contains a detonating gas mixture (e.g. $\text{CH}_4 + 2\text{O}_2$) at an initial pressure of 1 - 4 atm. Section 2 is filled with an inert gas mixture having the same acoustic impedance as the gas

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Measurement of Retardations of Inflammation at High S/062/60/000/008/003012
Temperatures B004/B054

mixture exploding in section 3 (measuring chamber). The gas mixtures were prepared by dosing with a gas counter of the type ГСБ-400⁸ (GSB-400) in rubber bags and by manual mixing, or by dosing under pressure in metal balloons and mixing by means of diffusion during 2 days. The measuring chamber contained 2 windows of organic glass. On one side, there was a discharging tube of the type ИФП-200⁴ (IFP-200), on the opposite side there was a photorecorder. The window in front of the photorecorder was covered with a gelatin solution. The measuring chamber was connected with a piezo-quartz pickup which ignited the discharge tube on the passage of a shock wave, and an ionization pickup with an oscilloscope of the type ОК-17М (OK-17M). The mixture in section 1 was ignited, the detonation wave ruptured the membrane, propagated as a shock wave in section 2, entered the measuring chamber 3, was reflected on the terminal flange of the chamber, and ignited the gas mixture. The intensity of the incident shock wave could be regulated by the initial pressure in section 1 (Fig. 2). The gelatin layer on the glass window became dull under the influence of the shock wave. Both this dulling and the flame were photorecorded (Fig. 3). Other substances, e.g. carbon black, were also used instead of gelatin. The authors calculate the gas temperature in the reflected shock wave. Fig. 4 shows the photograph of the ignition process in 2% C_7H_{16} + 98% air. A temperature increase

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X

82690

Measurement of Retardations of Inflammation at
High Temperatures

S/062/60/000/008/003/012
B004/B054

of 10^9 °K/sec was calculated. Figs. 5, 6 show $\log \tau$ as a function of $1/T$ for different mixtures. Taking account of the fact that at an initial pressure of 1 atm the pressure in the shock wave rose to 50 atm at 1100°K , and to 90 atm at 1500°K , the following equation was written down for τ : X

$\tau = 10^{-9} \exp(13900/T)$. For stoichiometric mixtures of the paraffin hydrocarbons CH_4 to C_7H_{16} with air, $\tau \leq 10^{-5}$ sec at $T \geq 1500^\circ\text{K}$. At $T \geq 1200^\circ\text{K}$, τ for propane, butane, and heptane is greater than for benzene. The ionization degree of the gas can be calculated by the Sach equation. There are 6 figures and 4 references: 3 Soviet and 1 US.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR
(Institute of Chemical Physics of the Academy of Sciences,
USSR)

SUBMITTED: February 18, 1959

Card 3/3

S/120/62/000/001/009/061
EO32/E514

AUTHORS: Borisov, A.A., Dolgoshein, B.A., Luchkov, B.I.,
Reshetin, L.V. and Ushakov, V.I.

TITLE: A study of spark-chamber characteristics

PERIODICAL: Priory i tekhnika eksperimenta, no.1, 1962, 49-54

TEXT: The authors report the construction and the main characteristics of an experimental argon-filled spark chamber with a working volume of 0.5 litres. The spark chamber consists of four plane-parallel electrodes (150 x 70 x 5 mm³) separated by cylindrical teflon insulators. Gap lengths of 8, 10, 12 and 30 mm have been used (in the latter case there is only one gap). The chamber is filled with technical argon mixed with a small amount of ethyl alcohol to reduce spurious discharges. The chamber is gated by two arrays of Geiger counters, one above and one below the chamber. The coincidence pulse from these two arrays triggers a high-voltage pulse generator based on the hydrogen thyratron ТГН-1 (TGI-1) 325/16. The pulse produced by the generator has a rise time of about 30 nanosec and a decay constant of 10^{-7} sec; the amplitude is approximately equal to the Card 1/2

A study of spark-chamber ...

S/120/62/000/001/009/061
E032/E514

maximum anode voltage on the thyatron. The delay between the passage of the nuclear particle and the application of the high-voltage pulse to the electrodes is about 0.7 μ sec, most of which is associated with the operation of the hydrogen thyatron. A clearing field of up to 100 V/cm is applied to the plates. Fig.3 shows the dependence of the efficiency of the chamber on the amplitude of the high-voltage pulse for various gas pressures (zero clearing field, high-voltage pulse delay 0.7 μ sec, inter-electrode gap 10 mm). Data are also reported on the dependence of the efficiency on the high-voltage decay time, the amplitude and polarity of the clearing field and the high-voltage delay time. It is reported that particle tracks at angles up to 35° with the normal to the plates can be reliably recorded. There are 6 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR
(Physics Institute AS USSR)

SUBMITTED: February 16, 1961

Card 2/3

37809

S/120/62/000/002/040/047

EO32/E514

9.12.1962
AUTHORS: Borisov, A.A., Dolgoshein, B.A. and Luchkov, B.I.

TITLE: A spark counter with a large interelectrode gap

PERIODICAL: Pribery i tekhnika eksperimenta, no.2, 1962,
170

TEXT: The dimensions of the counter are $40 \times 30 \times 10 \text{ cm}^3$ and the distance between the electrodes is 4.5 and 10 cm. It consists of a rectangular perspex frame and two dural electrodes on either side of the frame. The working gases are argon and neon (purity better than 0.1%), and ethyl alcohol and methylal are used as quenchers. The efficiency of the counter was found to remain at 100% for ten days without re-filling. In view of the simplicity of the counter, large area counters of this type ($1-2 \text{ m}^2$) may be feasible and may find application in cosmic-ray experiments. There is 1 figure.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute,
AS USSR)

SUBMITTED: July 11, 1961

Card 1/1

BORISOV, A.A.; DOLGOSHEIN, B.A.; LUCHKOV, B.I.; RESHETIN, L.V.; USHAKOV, V.I.

Investigating the characteristics of a spark chamber. Prib. i tekhn.
eksp. 7 no.1:49-54 Ja-F '62. (MIRA 15:3)

1. Fizicheskiy institut AN SSSR.
(Cloud chamber--Testing)

chemisly

S/020/63/149/003/025/028
B192/B102AUTHORS: Borisov, A. A., Kogarko, S. M.

TITLE: Investigation of the spinning detonation

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 3, 1963, 623-625

TEXT: In order to explain the phenomenon of the spinning detonation, the zone of the non-burning gas between the shock front and the reaction front was investigated by means of the collision method of spinning wave and reflected detonation wave. Mixtures of $\text{CH}_4 + 2\text{O}_2$ were used for the experiments which were carried out in tubes of 65 mm inside diameter, 4m long, with pressures from 0 to 30 mmHg. The traces of the waves were recorded on sooted films. The zone of the non-burning gas showed itself on the film as a fine network of traces. From the width of different sectors of this zone the retardation time τ of the inflammation and the temperature T were determined. $\log \tau$ is an approximately linear function of $1/T$. The zone of the non-burning gas is approximately triangular in shape. In places where the temperature is highest the width of the zone is almost zero and the component of the flow rate of the gas perpendicular

Card 1/2

Investigation of the spinning detonation

S/020/63/149/003/025/028
B192/B102

to the shock wave reaches its maximum value. In places of lowest temperature the width of the zone is the same as the diameter of the tube and the perpendicular component of the flow rate of the gas is of minimum value. There are 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR
(Institute of Chemical Physics of the Academy of Sciences
of the USSR)

PRESENTED: November 28, 1962, by N. N. Semenov, Academician

SUBMITTED: November 28, 1962

Card. 2/2

AIR Nr. 971-9) 20 May

chemistry

IGNITION OF METHANE MIXTURES IN SHOCK WAVES (USSR)

Borisov, A. A., S. M. Kogarko, and A. V. Lyubinov. IN: Akademiya nauk SSSR. Doklady, v. 149, no. 4, 1 Apr 1963, 869-871.

S/020/63/149/004/017/025

In a study of the effect of pressure and gas composition on ignition delay, the ignition of methane-oxygen mixtures containing variable amounts of inert diluents were investigated in reflected shock waves by means of a shock tube, an ionization gauge, a pressure transducer, and Schlieren photography. Curves of $\log \tau$ (τ = ignition delay in sec) versus the inverse temperature at 12.5 to 100 mm Hg were obtained for the following mixtures: 10% CH_4 + 90% air, 10% CH_4 + 20% O_2 + 70% Ar, and 10% CH_4 + 90% O_2 . Ignition delays $< 20 \mu\text{sec}$ were more strongly dependent on temperature than those $> 20 \mu\text{sec}$. Mixtures diluted with nitrogen exhibited smaller ignition delays than those diluted with argon; this is contrary to predictions based on the thermal ignition theory. With strongly diluted mixtures or mixtures containing excess methane, the initial oxidation stage is apparently controlled by the thermal decomposition of methane. The study was made at the Institute of Chemical Physics, Academy of Sciences USSR.

[PV]

Card 1/1

BORISOV, A.A.

Heat treatment of heavily loaded gears. Metalloved. 1 term.
obr. met. no.4:56-58 Ap '65. (MIRA 18:6)

1. Kolomenskiy teplovostroitel'nyy zavod.

BORISOV, A.A. (Moskva); ZASLONKO, I.S. (Moskva); KOGARKO, S.M. (Moskva)

Gas temperature behind reflected shock waves. PMTF no.6:104-109
N-D '64 (MIRA 18:2)

L 43716-65 EWT(1)/EWP(m)/EWA(d)/EPR/FGS(k)/EWA(h)/EWA(c) Pg. 1/Pi. 4 WW
 ACCESSION NR: AP5008506 S/0207/64/000/006/0104/0109 37
 3

AUTHOR: Borisov, A. A. (Moscow); Zaslanko, I. S. (Moscow); Kogarko, S. M. (Moscow)

TITLE: Gas temperature behind reflected shock waves

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 6, 1964, 104-109

TOPIC TAGS: gas temperature, temperature measurement, reflected shock wave, shock wave, shock tube, temperature range, reaction kinetics, unidimensional theory, explosive reaction

ABSTRACT: Inasmuch as direct measurements of temperature in the 1,500 to 2,500°K range, the most important and interesting range for the kinetics of many reactions, have not been made for inert gases, it was undertaken to measure the temperature behind a reflected shock wave by the method of the reversal of D-lines of the x-ray spectrum of sodium and to explain the correspondence between the real [experimental] values and the temperature profile calculated on the basis of the unidimensional theory and from the measured velocity of the incident shock wave in the temperature range 1,500 to 2,500°K, and also to investigate the possibilities of applying this method to the study of the progress of explosive reactions behind reflected shock waves. The experiments were carried out in a 50-mm inside-diameter shock tube, the

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L 43715-65

ACCESSION NR: AP5008506

low pressure section measuring 3.5 m, and the high pressure section 1.5 m. The distance from the center of the observation window to the tube end was 12-33 mm. An extensive and detailed description of the experimental setup is given. It is pointed out that ignition time delays in all the experiments with reaction-capable mixtures are in agreement with the published data. The experiments carried out with combustible mixtures showed that temperature increase after the ignition time lag takes place very rapidly. Orig. art. has: 8 figures and 1 formula.

ASSOCIATION: none

SUBMITTED: 17Dec63

ENCL: 00

SUB CODE: ME, TD

NO REF SOV: 005

OTHER: 003

me
Card 2/2

L 45612-65 EWT(m)/EPF(c)/EWG(m)/T Pr-4 RM
ACCESSION NR: AP5013757

UR/0020/65/162/002/0366/0369

AUTHOR: Borisov, A. A.; Kogarko, S. M.; Skachkov, G. I.

TITLE: Autoignition in systems with unbranched chain reactions

SOURCE: AN SSSR. Doklady, v. 162, no. 2, 1965, 366-369

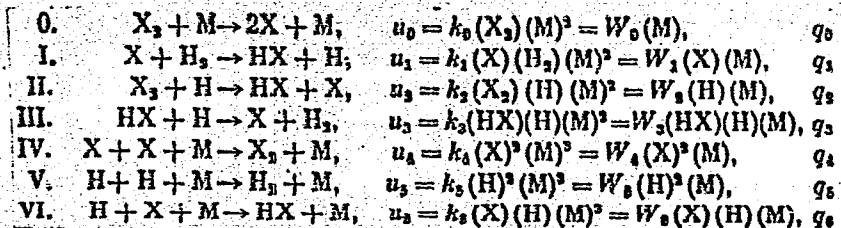
TOPIC TAGS: ignition delay, autoignition, chain reaction, combustion, reaction mechanism, unbranched chain

ABSTRACT: The theory of autoignition deals with two areas in detail: adiabatic autoignition, in which the chemical reaction rate is governed by Arrhenius' law (thermal explosion), and isothermal chain ignition (chain explosion). Most explosions, however, are governed by a mixed thermal-chain mechanism. It was of interest to determine the reaction-rate constants from ignition delay data, when the latter could be accurately determined, as e.g., in reactions with low ignition temperatures and high energies of activation. It was assumed that under adiabatic conditions, a simple unbranched chain causes thermal ignition; the rate of liberation of heat is determined by the rate of the chain reaction. Chlorination or bromination of hydrogen was chosen as the model reaction:

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L 45612-65

ACCESSION NR: AP5013757



where H and X are hydrogen and halogen, respectively; M is any particle; u_i and k_i are rates and constants of individual reactions; q_i are the heats of reaction. The following two approximate expressions were obtained for ignition delay times:

$$\tau = \frac{1}{2} \pi \sqrt{RT_0^2 c (W_1 + W_2) / E_0 (q_1 + q_2) W_0 W_1 W_2}.$$

$$\tau = \tau [1 + 2W_3 RT_0^2 c / (W_1 + W_2) E_0 (q_1 + q_2)]^{0.50}.$$

Orig. art. has: 2 figures and 12 formulas.

[VS]

Card 2/3

L 45612-65

ACCESSION NR: AP5013757

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 11Nov64

ENCL: 00

SUB CODE: FP

NO REF SOV: 003

OTHER: 001

ATD PRESS: 4001

Card 3/3

06182-67 EWT(m)/ENP(j) WW/JW/WE/RM

ACC NR: AP6030700

(A, N)

SOURCE CODE: UR/0195/66/007/004/0589/0596

AUTHOR: Borisov, A. A.; Kogarko, S. M.; Skachkov, G. I.

60
B

ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: Thermal decomposition of nitromethane

SOURCE: Kinetika i kataliz, v. 7, no. 4, 1966, 589-596

TOPIC TAGS: nitromethane, thermal decomposition, combustion, chemical kinetics

ABSTRACT: An experimental investigation of the autoignition of argon-diluted nitromethane vapors has been carried out in the temperature range 700—1300K. The purpose of the investigation was to determine the constant of nitromethane decomposition in as wide a temperature range as possible without resorting to far-out extrapolation, on the assumption that the dissociation of the initial nitromethane molecule along the C-N bond plays the governing role in the ignition process. It was found that the thermal decomposition of nitromethane is a first-order reaction. An analytical expression was derived, which relates the autoignition delay with kinetic and thermal parameters of the system, and from this expression the constant of the monomolecular decomposition was calculated. This constant,

$$k = 10^{11.2} \left(\frac{57000}{RT} \right)^{2.7} \exp \left(- \frac{57000}{RT} \right) \frac{1}{\text{sec}}$$

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UDC: 541.124+542.921.4

ACC NR: AP6030700

proved to be in good agreement with experimental data in the 700—1200K range. At
above 1200K, however, a deviation from experimental data was found, the possible
reasons for which are analyzed in the original article. Orig. art. has: 3 figures.
[SM]

[M.A. 68]

SUB CODE: 21/ SUBM DATE: 11Feb65/ ORIG REF: 004/ OTH REF: 012/

Card

2/2

plw

BORISOV, A. B.

Borisov, A. B.

"The clinical aspects and treatment of epidemic hepatitis in children."
Min Health RSFSR. Leningrad Sanitary-Hygiene Medical Inst. Leningrad,
1956. (Dissertation for the Degree of Candidate in Medical Science) :

So: Knizhnaya letopis', No. 25, 1956

BORISOV, A. B.

BORISOV, A. B.: "The problem of designing a rational system for the underground shape of hydraulic structures on non-rock foundations". Khar'kov, 1955. Min Higher Education Ukrainian SSR. Khar'kov Construction Engineering Inst, Chair of Hydraulic Structures. (Dissertations for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya letopis', No. 52, 24 December, 1955. Moscow.

BORISOV, A.D.

BORISOV, A.D.

Sochi-Matsesta health resort on the 40th anniversary of the Great
October Revolution. Vop.kur., fizioter. i lech.fiz.kul't. 22 no.5:
42-51 S-O '57. (MIRA 11:2)
(SOCHI)

BORISOV, A.D.

Sanatorium and health-resort care in the U.S.S.R. Med. sestra 18 no.5:
3-7 My '59. (MIRA 12:7)

1. Ministerstvo zdravookhraneniya SSSR, Moskva.
(SANATORIUMS) (HEALTH RESORTS, WATERING PLACES, ETC.)

BORISOV, A.D.; CHETVERIKOV, N.S.

Most important health resorts of the Rumanian People's Republic;
personal impressions. Vop. kur., fizioter. i lech. fiz. kul't.
24 no. 4:361-365 J1-Ag '89. (MIRA 14:2)
(RUMANIA—HEALTH RESORTS, WATERING PLACES, ETC.)

BORISOV, A.D.

"Methodological bases of the over-all treatment at the Sochi-Matsesta Health Resort," edited by M.M. Shikhov. Reviewed by A.D. Borisov.
Vop. kur. fizioter. i lech. fiz. kul't. 25 no. 5:464-466 S-O '60.
(MIRA 13:10)

1. Glavnyy spetsialist po kurortam Ministerstva zdravookhraneniya.
(SOCHI-MATSESTA—MINERAL WATERS, SULPHUROUS)
(SHIKHOV, M.M.) (THERAPEUTICS, PHYSIOLOGICAL)

BORISOV, A.D.

Sanatorium and health resort care and our tasks. Med. sestra no. 5:
3-6 My '61. (MIRA 14:6)

1. Iz Ministerstva zdravookhraneniya SSSR, Moskva, glavnyy
spetsialist po kurortam.
(HEALTH RESORTS, WATERING PLACES, ETC.)

BORISOV, A.D.; LAKHMAN, Kheynts [Lachman, H.], doktor (Bad El'ster)

First Conference on Health Resort Therapy and Physical Therapy in
the People's Republic of Bulgaria. Vop. kur., fizioter. i lech.
fiz. ku'i't. 26 no.1:75-79 '61. (MIRA 14:5)

(BULGARIA—PHYSICAL THERAPY—CONGRESSES)

(GERMANY, EAST—PHYSICAL THERAPY)

BARDIN, I.P.; BORISOV, A.F.; BELAN, R.V.; YERMOLAYEV, G.I.; VAYSBERG, L.E.;
ZHEREBIN, B.N.; BORODULIN, A.I.; SHAROV, G.V.; DOMNITSKIY, I.F.; CHUSOV, P.P.
SOROKO, L.N.; KLIMASENKO, L.S.; PAVLOVSKIY, S.I.; ZIL'BERSHTEYN, M.B.;
LYULENKOV, I.S.; NIKULINSKIY, I.D.; BRAGINSKIY, I.A.; SALOV, Ye.M.;
TROSHIN, N.F.; PETRIKEYEV, V.I.; ARGUNOV, M.I.; DUL'NEV, F.S.; BIDULYA, L.N.
GAYNANOV, S.A.; FROLOV, N.P.; VINICHENKO, V.S.; KOGAN, Ye.A.

G.E. Kazarnovskii; obituary. Stal' 15 no.8:757 Ag'55. (MLRA 8:11)
(Kazarnovskii, Grigoriï Rfimovich, 1887-1955)

BORISOV, A. F.

137-1957-12-22895

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 9 (USSR)

AUTHOR: Borisov, A. F.

TITLE: Major Trends in the Growth of the Rolling Mill Industry in Plants of the Ministry of Ferrous Metallurgy of the USSR, and Goals for Future Increase in the Output of Rolled Stock (Osnovnyye napravleniya v razvitii prokatnogo proizvodstva na predpriyatiyakh ministerstva chernoy metallurgii SSSR i zadachi po dal'neyshemu uvelicheniyu vypuska prokata)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii, 1956, Nr 10, pp 7-11

ABSTRACT: An examination of quantitative calculations for different plants shows that considerable margins are available for the purpose of reducing the net cost of rolling, primarily through the saving of metal, and through the elimination of spoilage, an increase in the operating efficiency, improvement of the repair services, simplification and improvement of the shop supervision, and the elimination of the payment of penalties for poor timing in delivering the product to the customer. Further growth of the rolling mill technology should encompass the introduction of new mills of the most

Card 1/2

137-1957-12-22895

Major Trends in the Growth of the Roll'g Mill Indus. (cont.)

advanced and efficient design, as well as installations offering maximum mechanization and automation of processes.

A. Sh.

1. Industry-USSR
2. Rolling mills-Production
3. Materials-Control
4. Rolling mills-Growth

Card 2/2

BORISOV, A.F.

For further progress in the iron and steel industry. Stal' 16
no.1:3-6 '56. (MLRA 9:5)

1. Zamestitel Ministra chernoy metallurgii SSSR.
(Iron industry) (Steel industry)

BORISOV, A. F., Candidate Tech Sci (diss) -- "The use of the EMF method for studying the processes of diffusion, homogenization, and the structural aspects of silicate melts". Gor'kiy, 1959. 20 pp (Gor'kiy Polytech Inst im A. A. Zhdanov), 150 copies (KL, No 26, 1959, 125)

5(2), 5(4)

SOV/153-2-3-21/29

AUTHORS: Borisov, A. F., Dertev, N. K.

TITLE: An Electrochemical Method for Investigating the Melting Process of Glass

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 420-423 (USSR)

ABSTRACT: In earlier investigations the authors had found that the emf of a galvanic pair of glasses depends on the concentration difference of the oxygen ions in the two glasses (Ref 4). Due to this fact the measurement of the emf of molten glass may be used for the automatic quantitative determination of the chemical homogeneity of the melt. Similar investigations had been carried out by Le Clerc (Ref 1), Yesin and Lepinskikh (Ref 2), Didschenko and Roshov (Ref 3). The emf of a completely homogeneous melt equals theoretically zero. By a continuous control and recording of the emf of the glass during the melting process the kinetics of these processes may be investigated in dependence on the different various technological factors. The viscosity of the glasses was determined according to experimental data by Skornyakov, Kuznetsov, Yevstrop'yev (Ref 8). In

Card 1/3

SOV/153-2-3-21/29

An Electrochemical Method for Investigating the Melting Process of Glass

the present paper this method is used for the investigation of the melting processes of glasses with 2 components ($\text{Na}_2\text{O}-\text{SiO}_2$).

The measuring device applied is schematically represented and described in detail. By means of the method developed the influence exercised by some chemically active additions (NaNO_3 , Na_2SiF_6 , NaCl , $(\text{NH}_4)_2\text{SO}_4$) on the velocity of the melting of glass of the composition 34% Na_2O and 66% SiO_2 was investigated.

The results are tabulated. The method may also be used for the investigation of the melting processes of glasses with complicated composition. In this case the residue potential of the homogeneous glass of the corresponding composition must be determined first; this potential is then used as calibration value for the measurement of homogeneity. The new method described is therefore well suited for testing the homogeneity of glass masses. The student A. F. Koklyunov assisted in the experimental work. There are 4 figures, 1 table, and 8 references, 6 of which are Soviet.

Card 2/3

An Electrochemical Method for Investigating the Melting Process of Glass

SOV/153-2-3-21/29

ASSOCIATION: Gor'kovskiy politekhnicheskii institut imeni A. A. Zhdanova
Kafedra tekhnologii silikatov (Gor'kiy Polytechnic Institute
imeni A. A. Zhdanov, Chair of Silicate Technology)

SUBMITTED: March 15, 1958

Card 3/3

DERTEV, N. K.; VORONKOVA, Z. P.; BORISOV, A. F.

"Application of EMF method to studying glass structure."

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad,
16-21 Mar 64.

ACCESSION NR: AP4019332

S/0072/64/000/003/0009/0011

AUTHOR: Borisov, A. F. (Candidate of Technical Sciences); Zadumina, V. I. (Engineer)

TITLE: New method for controlling changes in glass crystal materials

SOURCE: Steklo i keramika, no. 3, 1964, 9-11

TOPIC TAGS: glass, glass material, glass crystallization, glass emf measurement, glass crystal material, glass crystallization control, glass crystallization, kinetics

ABSTRACT: Many physical chemistry methods are used for analyzing the structure of glass which has undergone heat working. The most effective are those methods which permit a direct monitoring of the process kinetics and which are also distinguished by a higher sensitivity to structural changes. The authors developed a new method which is based on change in emf. This method is highly sensitive to structural changes and permits a direct control of the course of crystallization during heat working. The operating principle is as follows. If two plates of glass of one and the same composition, one of which is crystallized,

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ACCESSION NR: AP4019332

are joined together and then placed between platinum electrodes and heated, emf originates between the electrodes after a specific temperature had been attained. This emf attains a value of hundreds of millivolts. The emf will gradually diminish in proportion to the crystallization of the second glass until the ratio between the crystal and nitreous phases becomes identical. The platinum electrodes are gaseous oxygen electrodes. The electrodes potential depends upon the activity of the oxygen in the glasses at a constant partial pressure of the oxygen in the gaseous phase. In turn, the activity of the oxygen ions depends upon the electrolyte structure and temperature. The emf is measured by a compensation method. A PPTV-1 potentiometer working in a complex with a mirror ballistic galvanometer was used to measure the emf. Findings show that samples reduce their resistance somewhat at 600C, and this enables the emf of the galvanic element to be measured. The emf is reduced at 730C, which is apparently associated with the precipitation of the submicrocrystalline phase, which then is dissolved to a significant extent with a temperature rise. A second sharp reduction in the emf from 200 to 60 millivolts sets in over a temperature range of 790-825C. A reduction in the emf is accompanied by the formation of a crystalline phase in the sample, which is confirmed by DTA data. The emf grows to 120 millivolts with a temperature

Cord 2/3

ACCESSION NR: AP4019332

rise from 830 to 1225C. In studying the kinetics of the crystallization processes, it is not necessary to use as the standard a crystallized glass of the same composition as the one being tested. Any other sample which does not undergo any substantial structural changes during the heating process can be used. In this case, only the absolute enif values change but the kinetics of the crystallization process can be monitored with the same success. Orig. art. has: 4 figures.

ASSOCIATION: Saratovskiy filial Instituta stekla (Saratov Division of Glass Institute)

SUBMITTED: 00

DATE ACQ: 27Mar64

ENCL: 00

SUB CODE: CH, MA

NO REF SOV: 000

OTHER: 001

Card 3/3

TIMOSHENKO, I.V.; PAVLYUKOVA, G.V.; BORISOV, A.F.; SUSLOVA, I.A.; CHERNINA, L.L.

Using vibration to improve the quality of electrocast refractories.
Ogneupory 29 no.11:496-499 '64. (MIRA 18:1)

1. Saratovskiy filial Nauchno-issledovatel'skogo instituta stekla.

L 60949-65 EWT(1)/EMP(e)/EWT(m)/EMP(1)/T/EEC(b)-2/EMP(b) Pg-4/Pi-4 IJP(c)
33/WH

ACCESSION NR: AP5018933

UR/0363/65/001/006/0957/0962

656.1:542.65

AUTHOR: Dorte⁴⁴v, N. K.; Borisov, A. F.⁴⁴; Zadumin, V. I.⁴⁴; Trushkov, A. I.⁴⁴

TITLE: Emf study of the effect of heat treatment of glass in the precrystallization period on the nature of crystallization ²¹

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 6, 1965, 957-962

TOPIC TAGS: glass crystallization, ^{15 44}lithium glass

ABSTRACT: To study crystallization processes in a glass of the system $\text{Li}_2\text{O} - \text{Al}_2\text{O}_3 - \text{SiO}_2$ containing an admixture of TiO_2 , use was made of a rapid emf method which made it possible to follow changes in the ratio of the vitreous to the crystalline phase, structural changes in the glass during the precrystallization period which substantially affect the subsequent crystallization, and the sequence of separation of the phases in the course of the heat treatment. In addition, differential thermal and x-ray structural analysis were employed. Results of the emf study of catalyzed crystallization lead to the conclusion that during the initial period of crystallization only the first crystalline phase is formed, the time of its formation and its quantity being dependent on the temperature.

Card 1/2

I. 60949-55

ACCESSION NR: AP5018933

At high temperature, the crystalline phases separate together. The most extensive formation of the first crystalline phase can be achieved by using a two-stage heat treatment (during the precrystallization period and at a low crystallization temperature). Emf measurements make it possible to determine the optimum temperature of preliminary heat treatment; for the glass under consideration, this temperature is 60-70C below the softening point. Orig. art. has: 5 figures and 2 tables. 4/

ASSOCIATION: Gor'kovskiy politekhnicheskii institut im. A. A. Zhdanova (Gor'kiy Polytechnic Institute), Saratovskiy filial Gosudarstvennogo instituta stekla (Saratov Branch, State Institute of Glass) 44

SUBMITTED: 11Feb65

ENCL: 00

SUB CODE: MT, G-C

NO REF SOV: 004

OTHER: 000

Corr/ 2/2

KOROBV, P.I.; KHLBENIKOV, V.B.; BOLISOV, A.F.; SKOCHINSKIY, A.A.; SHEVYAKOV, L.D.; MAL'NIKOV, M.V.; MELESIKIN, S.M.; MOSKAL'KOV, Ye.F.; POKHOVSKIY, M.A.; KAPLUNOV, R.P.; BOGOLYUBOV, B.P.; ARUTYUNOV, H.B.; BOYKO, V.Ye.; BRINZA, N.K.; FEDOROV, V.F.; AGOSHKOV, M.I.; BALONENKOV, A.V.; VORONIN, L.H.; IPATOV, P.M.; MAZAROV, P.P.; SLUTSKAYA, O.M.; CHERNENKO, M.B.; RABINOVICH, V.I.; STEVSKIY, V.N.; TROITSKIY, A.V.; GOL'DIN, Ya.A.; DZHAPARIDZE, Ye.A.; ZHURAVLEV, S.P.; KUZNETSOV, K.K.; MALEVICH, M.A.; MARINENKO, M.P.; MARTYNOV, G.P.; NATAPOV, P.F.; PERTSEV, M.A.; ROSSMIT, A.F.; RYASHOV, A.A.; SOSEDOV, O.O.; VILKADOV, V.S.; ZUBAREV, S.N.; SHAFARENKO, I.P.

Nikolai Nikolaevich Patrikeev; an obituary. Gor.zhur. no.6:76 Je '60.

(Patrikeev, Nikolai Nikolaevich, 1890-1960)

(MIRA 14:2)

IOFFE, B.V.; BORISOV, A.I.

Refractometric determination of tertiary butyl alcohol in complex mixtures with water and secondary and primary alcohols. Zhur.anal. khim. 15 no.2:227-230 Mr-Apr '60. (MIRA 13:7)

1. Leningradskiy gosudarstvennyy universitet im A.A.Zhdanova.
(Butyl alcohol)

BORISOV, A.I., kand. tekhn. nauk

Movement of pulp in vertical pipes. Trudy VNIIGidrouglia no.2:
75-95 '63. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruk-
torskiy institut dobychi uglya gidravlicheskim sposobom.

BORISOV, A.I., inzhener; NAUMOVA, M.F., inzhener; ROGATKIN, N.S.,
kandidat tekhnicheskikh nauk; SEMENSKIY, Ye.P., kandidat
tekhnicheskikh nauk

Mechanizing the selection and preparation of cut peat samples
on a TP type peat loader. Torf.prom.32 no.5:20-21 '55.
(MLRA 8:10)

1. Moskovskiy torfyanoy institut
(Peat machinery)

BERESNEVICH, V.V.; BORISOV, A.I.

Large BMD-4 hammer crusher used by the Main Office for the Inspection
of Peat Quality. Torf.prom. 32 no.7:24-27 '55. (MLRA 9;1)

1.Giktorf (for Beresnevich).2.Moskovskiy torfyanoy institut (for
Borisov). (Peat machinery)

DORISOV, A. I.

25(1)

PHASE I BOOK EXPLOITATION

SOV/2966

Rozenman, Yakov Aleksandrovich, and Aleksandr Iosifovich
Borisov

Opyt kuznechnykh tsekhov metallurgicheskikh zavodov (Forge Shop Practice at Metallurgical Plants), Sverdlovsk, Metallurgizdat, Sverdlovskoye otd-niye, 1956. 77 p. Errata slip inserted. 3,700 copies printed.

Ed.: M. G. Zlatkin; Ed. of Publishing House: V. P. Kel'nik;
Tech. Ed.: Ye. M. Zef

PURPOSE: This book is intended primarily for skilled workers in forge shops, but may also be useful to technical personnel.

COVERAGE: The book describes technological advances made at three Soviet plants (Pervoural'sk New Tube Plant, Magnitogorsk Metallurgical Plant, and Novotagil'skiy Metallurgical Plant) in the field of open-die and blacksmith- die forging. Matters of work organization are also discussed. No personalities are mentioned. There are 15 references, all Soviet.

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AVAILABLE: Library of Congress (TS225.R68)

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1-8-60

3600. NEW HAMMER MILL (FOR MILLED PEAT). Boriso, A.I. (Torf. Fres.
(Peat Ind., Moscow), 1955, (4), 31-34). Test figures and illustrations are
given for a new hammer mill for use in analysis of peat samples. It takes 4 to
6 kg samples and grinds them to 3 to 4 mm. It is recommended for use. (L).

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stroi. 8 no.4:13-14 Ap'64 (MIRA 17:7)

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leniye tresta Shakhtspetsstroy.

BORISOV, A.I.; NEGODAYEV, M.N.; TAT'KOV, V.A.

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"Investigation of nonlinear properties of circuits with semi-conductor triodes." Mos, 1957. 11 pp. (Min ^{of Communications} ~~Intercommun~~ USSR, Mos ^{Electrical Engineering} ~~Electrotech~~ Inst of ~~Inter~~ Communications). 120 copies. (KL, 9-58, 117)

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DURIDOV, A. I.

"Ambient Temperature Dependence of Static Volt-Ampere Characteristics of Junction Transistors," (Semiconductor Devices and Their Uses; Collection of Articles, no 2), p.169, Moscow, Izd-vo "Sovetskoye radio," 1957. 398 p

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Correlation between the static voltage-current characteristics of
junction triodes and the surrounding temperature. Poluprov. prib. 1
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(Transistors) (Temperature)

AUTHOR: Borisov, A.I.

TITLE: A-U Sci Conf dedicated to "Radio Day", Moscow, 20-25 May 1957.
"Nonlinear Amplifier Distortions in Transistors,"

PERIODICAL: Radiotekhnika i Elektronika, Vol. 2, No. 9, pp. 1221-1224,
1957, (USSR)

For abstract see L.G. Stolyarov.

DORISOV, M. I.

TRANSISTORS

"Estimate of Nonlinear Properties of Junction Transistors" by
A. I. Borisov. Elektrosvyaz, No 12, December 1957, pp 37-44.

The author introduces coefficients that characterize the fundamental nonlinear properties of junction transistors. He shows that the nonlinear distortion introduced by the transistor is due to electric processes originating in the emitter and collector p-n junctions in the base region and he recommends a method for selecting transistors with least pronounced nonlinear properties. Reference is made to an article by W. M. Webster, Proceedings IRE, Vol. 42, pp 914-920, 1954.

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PHASE I BOOK EXPLOITATION

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RSFSR. Moskovskiy ekonomicheskii administrativnyy rayon. Sovet narodnogo khozyaystva

Poluprovodnikovyye diody i triody i ikh primeneniye; sbornik statey. (Semiconductor Diodes and Triodes and Their Uses; Collection of Articles) Moscow, Tsentr. byuro tekhn. inform., 1958. 102 p. (Series: Dostizheniya nauki i tekhniki) 1,700 copies printed.

Consulting Engineer: Ye.Z. Korobeynikova; Ed.: G.P. Gaus.

PURPOSE: This book may be useful to engineers in the field of semiconductor electronics.

COVERAGE: The articles in this collection discuss problems in the design, manufacture, and application of new types of semiconductor devices. The double-base diode is described and results of the calculation of its characteristics are given. Fused-junction silicon and germanium triodes are discussed

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Semiconductor Diodes and Triodes (Cont.)

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and the characteristics of the type 314 fused-junction triode are presented. The effect of feedback in transistor amplifiers on nonlinear distortions is covered. Operation of low-frequency transistor amplifiers for individual units of multichannel communication systems is explained and a discussion of transistor units of the KPP 30/60 system is presented. Attention is given to the problems of cooling transistor devices. There is a review of Soviet and Western magazines and patents for 1956-1957 concerned with semiconductor devices and their applications. There are no references.

TABLE OF CONTENTS:

Press, F.P. Fused-Junction Silicon n-p-n- Triodes 4
The author discusses properties of silicon and describes the advantages of silicon triodes over germanium triodes. He also describes the construction and characteristics of fused-junction silicon n-p-n triodes.

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Semiconductor Diodes and Triodes (Cont.)

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Samokhvalov, M.M. Type 314 Germanium High-frequency Triodes 12
The author discusses the construction and applications of type 314 germanium triodes. He also explains the equivalent circuit of a fused-junction transistor and discusses limiting operating conditions of type 314 triodes.

Dobkin, A.S. Double-base Germanium Diode 25
The author discusses basic parameters and principles of operation of double-base diodes. He also explains the construction and characteristics of diodes and gives examples of their application.

Borisov, A.I. Nonlinear Distortions in Feedback Transistor Amplifiers 37
The author discusses nonlinear distortions in transistor amplifiers with and without feedback and describes methods of using feedback to decrease the distortions. He also derives expressions for calculating performance of transistor

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Semiconductor Diodes and Triodes (Cont.)

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amplifiers with various types of feedback.

Muradyan, A.G., and G.M. Mikirtichan. Transistor Amplifiers for Individual Units of Multichannel Communication Systems 61
The authors discuss the operation and characteristics of a low-frequency transistor amplifier used in a standard twelve-channel high-frequency system and derive formulas for calculating amplifier performance. A discussion of a transistor audio amplifier and a control-signal receiver is also presented.

Zaryanov, N.V. Cooling of Semiconductor Devices 74
The author describes a transistor chassis absorbing heat from transistor circuits and derives expressions that may be used in the design of transistor cooling elements.

Fridolin, G.G. Review of Certificates of Inventorship, Foreign Journals, and Patents for 1956 and 1957 Concerned With Semiconductor Devices and Their Applications 81
I. Transistor generators of sinusoidal oscillations 81
II. Flip-flop circuits and pulse generators 97

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Semiconductor Diodes and Triodes (Cont.)

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The author reviews Soviet and Western patents and magazines concerned with transistor circuits. He discusses the operation of various transistor oscillators, frequency dividers, modulators, and multivibrators.

AVAILABLE: Library of Congress (TK7872.T73 P58)

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7-23-59

Card 5/5

AUTHOR: None Given 32-2-56/60
TITLE: Short Communications (Korotkiye soobshcheniya)
PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol.24, Nr 2, pp.250-251 (USSR)

ABSTRACT: K. Ye. Perepelkin (Laboratory for Carbonic Disulfide of the All-Union Institute for Scientific Investigations of Artificial Fibers) proposed an aspirator for achieving slow pressure changes in equipment for the determination of surface tensions of highly viscous liquids, consisting of a flask with a content of 10 - 20 liters, into which water flows in or out slowly.
V. S. Ogiyenko (State University, Irkutsk) developed an electrode consisting of a glass and a calomel electrode. From a figure it can be seen, that the glass electrode, which is filled with 0,1n HCl is fastened in the center of a glass tube by means of paraffin and resin. The calomel electrode is mounted in a second glass tube, which is fitted with a ground section and which is put around the first one. Both tubes or electrodes, respectively, are situated in an eprou-

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